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ABSTRACT

The present invention relates to a production method of a plastic optical fiber which comprises the steps of heat drawing an undrawn plastic optical fiber obtained by melt spinning and annealing the drawn fiber at a circumferential velocity ratio between the front and rear rollers (circumferential velocity of a rear roller / circumferential velocity of a front roller) of 0.5 to 1.2 under heating conditions which satisfy  $4 \leq y \leq -1.5x + 330$  and  $(T_{gc} - 5)^{\circ}\text{C} \leq x \leq (T_{gc} + 110)^{\circ}\text{C}$  [ $T_{gc}$ : a glass transition temperature of a core,  $x$ : an annealing temperature ( $^{\circ}\text{C}$ ), and  $y$ : an annealing time (seconds)]. According to the present invention, a plastic optical fiber having a small thermal shrinkage ratio and excellent heat resistance can be provided.